

U.1 Background

U.1.1 Active Municipal Solid Waste Landfill

Number of Landfills: 2

Emission Source Type:
Fugitive

Emission Source ID: LA

The Mountain Home AFB municipal solid waste landfill (MSWLF) occupies approximately 105 acres in the southwest corner of the base. It is the third landfill that has been operated by Mountain Home AFB and began operations in 1969. It is estimated that the MSWLF will be active until the year 2016, and the post-closure care period will be 30 years (until the year 2046). The base MSWLF is not open to the general public. It currently serves a military population of approximately 5,200 residents. The base MSWLF received an estimated 2,718 MG/yr of waste in CY 2005 (Appendix AAA-16).

The Operable Unit No. 1 Limited Field Investigation Record indicated hazardous materials have not been placed in the MSWLF. Currently, batteries, used oil, tires, bulk liquids, improperly prepared asbestos, and hazardous and PCB wastes are prohibited from disposal. Scavenging of landfill material also is prohibited. The MSWLF currently utilizes three trenches, one for wood and rubble, one for properly prepared asbestos, and one for municipal solid waste. Daily cover is at least 6 inches thick, with the exception of the wood and rubble cell, which does not require daily cover. Native soils between the bottom of the cells and basalt bedrock are silty clays approximately 10 feet thick (J. J. Howard Engineering and Surveying, 1996).

U.1.2 B Street Landfill

The B Street Landfill was the main sanitary landfill from 1956 through 1969. It occupies the northwest corner of Mountain Home AFB. The Central District Health Department (CDHD) granted approval to Mountain Home AFB to close this landfill on December 6, 1993, under the Installation Restoration Program. On June 4, 1994, Mountain Home AFB notified CDHD that the trench area was covered, graded, and seeded in accordance with the closure plan. This area is still available for use to dispose of construction and demolition debris (e.g., inert material, dirt, concrete, etc.). The closed trench area of this landfill is suspected to have received wastes from Mountain Home AFB operations, including materials such as fuels, solvents, pesticides, and used oil, in addition to household waste (J. J. Howard Engineering and Surveying, 1996).

According to base records no construction/demolition material was deposited in the B-Street Landfill for CY 2005.

U.2 Emission Calculation Method

The APIMS standard algorithm code LAND-01 was identified to calculate VOC and HAP emissions for the Active MSWLF.

U.3 Sample Calculations

The following assumptions were made for the LAND-01 algorithm: current waste acceptance rate as 2,718 MG/yr; the number of years open as 37; the number of years since closure as 0; and an ambient temperature of 77 degrees Fahrenheit.

The EPA-recommended methane generation rate constant of 0.02 yr^{-1} for landfills located in areas receiving less than 25 inches of rain per year.

$$\text{LAND-01} = (\text{EF} * \text{R} * (e^{-kc} - e^{-kt})) / 0.020677 / (T + 459.69) * 16$$

Ethylbenzene Calculation:

$$= .006 * 2718 * (e^{-.02*0} - e^{-.02*37}) / 0.020677 / (77 + 459.69) * 16$$

$$= 13.1 \text{ lbs}$$

where:

LAND-01 = Emissions, lbs

EF = Emission Factor, m^3/MMGR (1,000,000 grams/yr)

R = Average annual refuse acceptance rate during active life, Mg/yr (1,000,000 grams/yr)

e = Base log, unitless

k = Methane generation constant, yr^{-1}

c = Time since landfill closure (c=0 for active landfills)

t = Time since the initial refuse placement, yr.

Unit conv. = $\frac{0.020677 \text{ atm} * \text{m}^3}{\text{lbmol} * \text{R}}$

T = Ambient Temperature (Fahrenheit)

Methane molecular weight = 16 lb/lbmol

A three-step process is used when disposing of waste in a landfill: spreading the waste, compacting the waste, and covering the waste with soil. Covering waste with soil is performed using heavy equipment (e.g., bulldozers, graders, etc.) and results in airborne emissions of fugitive dust (PM_{10}).

Bulldozing (Overburden Material)

$$\text{BEF} = (1.0(s)^{1.5} / M^{1.4}) * (0.75)$$

where:

BEF = Bulldozing emission factor (lb/hr)

U. Landfill Operations

s = Material silt content, % (assumed $s = 6.9\%$)

M = Material moisture content, % (assumed $M = 7.9\%$)

$$PM = (1.0(s)^{1.5}/M^{1.4}) * (0.75) = 0.82 \text{ lb/hr}$$

PM_{10} = Emissions of particulates (lb/yr)

Annual hours of operation is based on 9 hrs per day, 5 days per week, 52 weeks per year = 2,340 hr/yr

PM_{10} = BEF*Annual hours of operation

$$PM_{10} = 0.82 \text{ lb/hr} * 2,340 \text{ hr/yr} = 1,919 \text{ lb/yr}$$

Grading

$$GEF = (0.051(S)^2) * (0.6)$$

where:

GEF = Grader emission factor (lb/VMT) [Note: VMT = vehicle miles traveled.]

S = Average vehicle speed, km/hr (assumed $S = 5 \text{ mi/hr}$).

$$GEF = 0.051(5)^2 * 0.6 = 0.77 \text{ lb/VMT}$$

Estimated grader miles traveled during the year = 3,120 VMT/yr

PM_{10} = GEF *Annual miles traveled

$$PM_{10} = 0.77 \text{ lb/VMT} * 3,120 \text{ VMT/yr} = 2,402 \text{ lb/yr}$$

U.4 Actual Emissions Summary

U.4.1 Active Municipal Solid Waste Landfill

The APIMS process ID and actual annual criteria pollutant emissions are presented in Table U-1. Particulate emissions generated by landfill bulldozing and grading operations are also presented in Table U-1. Actual annual VOC/HAP emissions are summarized in Table U-2.

U.5 Potential Emissions Summary

U.5.1 Active Municipal Solid Waste Landfill

Potential emission estimates are based on the 2000 AEI projected landfill methane increase of $K_{p/a} = 4.21$. The APIMS process ID and potential annual criteria pollutant emissions are presented in Table U-3. Potential annual VOC/HAP emissions are summarized in Table U-4.

2005 Actual Emissions

Table U-1

Calculation Name: LANDFILL

Process ID	Process Name	Unique Process ID	CAS No.	Chem. Name	Emissions (LBS)	Emissions (Ton)
IMI18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 PM10	1008 630080	CARBON MONOXIDE	106.103	0.053051
IMI18921216--	ACTIVE LANDFILL GRADING	1216 PM10		PARTICULATE MATTER <10UM (PM10)	2402.4	1.2012
IMI18921215--	ACTIVE LANDFILL BULLDOZING	1215 PM10		PARTICULATE MATTER <10UM (PM10)	1918.8	0.9594
				Sum CAS: PM10	4321.2	2.1606

2005 HAP Actual Emissions

Table U-2

Calculation Name: LANDFILL

Process ID	Process Name	Unique Process ID	CAS No.	HAP / VOC	Chem. Name	Emissions (LBS)	Emissions (Ton)
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	100414	Both	ETHYLBENZENE	13.1468	0.006573
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	106934	Both	ETHYLENE DIBROMIDE	0.0043	0.000002
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	107062	Both	ETHYLENE DICHLORIDE	1.0897	0.000545
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	107131	HAP	ACRYLONITRILE	9.0225	0.004511
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	108101	Both	METHYL ISOBUTYL KETONE	5.0313	0.002516
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	108907	Both	CHLOROBENZENE	0.7565	0.000378
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	110543	Both	HEXANE	15.2122	0.007606
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	1330207	Both	XYLENE (MIXED)	34.5101	0.017255
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	463581	HAP	CARBONYL SULFIDE	0.7909	0.000395
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	56235	HAP	CARBON TETRACHLORIDE	0.0172	0.000009
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	67663	Both	CHLOROFORM	0.0967	0.000048
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	71556	Both	METHYL CHLOROFORM	1.7194	0.00086
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	7439976	HAP	MERCURY	0.0021	0.000001
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	75014	Both	VINYL CHLORIDE	12.3237	0.006162
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	75150	HAP	CARBON DISULFIDE	1.1864	0.000593
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	7783064	HAP	HYDROGEN SULFIDE	59.9699	0.029985
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	79016	Both	TRICHLOROETHYLENE	9.9552	0.004978
IM18921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	79345	HAP	1,1,2,2-TETRACHLOROETHANE	5.0055	0.002503

2005 Potential Emissions

Table U-3

Calculation Name: LANDFILL

Process ID	Process Name	Unique Process ID	CAS No.	Chem. Name	Emissions (LBS)	Emissions (Ton)
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008	630080	CARBON MONOXIDE	446.69	0.223
IM118921216--	ACTIVE LANDFILL GRADING	1216	PM10	PARTICULATE MATTER <10UM (PM10)	10114.10	5.057
IM118921215--	ACTIVE LANDFILL BULLDOZING	1215	PM10	PARTICULATE MATTER <10UM (PM10)	8078.15	4.039
Sum CAS: PM10					18192.25	9.096

2005 HAP Potential Emissions

Table U-4

Calculation Name: LANDFILL

Process ID	Process Name	Unique Process ID	CAS No.	HAP/VOC	Chem. Name	Emissions (LBS)	Emissions (Ton)
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 100414	Both		ETHYLBENZENE	14.72	0.007
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 106934	Both		ETHYLENE DIBROMIDE	0.00	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 107062	Both		ETHYLENE DICHLORIDE	1.22	0.001
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 107131	HAP		ACRYLONITRILE	10.11	0.005
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 108101	Both		METHYL ISOBUTYL KETONE	5.64	0.003
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 108907	Both		CHLOROBENZENE	0.85	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 110543	Both		HEXANE	17.04	0.009
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 1330207	Both		XYLENE (MIXED)	38.65	0.019
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 463581	HAP		CARBONYL SULFIDE	0.99	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 56235	HAP		CARBON TETRACHLORIDE	0.02	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 67663	Both		CHLOROFORM	0.11	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 71556	Both		METHYL CHLOROFORM	1.93	0.001
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 7439976	HAP		MERCURY	0.00	0.000
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 75014	Both		VINYL CHLORIDE	13.80	0.007
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 75150	HAP		CARBON DISULFIDE	1.33	0.001
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 7783064	HAP		HYDROGEN SULFIDE	67.17	0.034
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 79016	Both		TRICHLOROETHYLENE	11.15	0.006
IM118921008--	LF - ACTIVE MUNICIPAL SOLID WASTE LANDFILL	1008 79345	HAP		1,1,2,2-TETRACHLOROETHANE	5.61	0.003

Appendix B.6.2
Paved and Unpaved Roads

Table B.4.7.2-1

Paved Roads
Paved Roads PTE

Paved Roads emission factor from AP-42, Section 13.2.1: *Paved Roads* (11/06)

$$E = k(sL/2)^{0.65}(W/3)^{1.5} - C$$

where:

$$k = 0.016$$

$$k = 0.082$$

$$sL^a = 7.4$$

$$W = 3.2$$

$$C = 0.00047$$

$$C = 0.00047$$

$$E_{(PM_{10})} = 0.04$$

$$E_{(PM)} = 0.21$$

$$lb/vmt \text{ [Table 13.2.1-1, for } PM_{10}]$$

$$lb/vmt \text{ [Table 13.2.1-1, for Total PM]}$$

$$[silt \text{ loading (g/m}^2)], \text{ Table 13.2.1-4}]$$

$$\text{tons [Mean vehicle weight= car+pickup+3 axle + 5 axle + motorcycle]}$$

$$lb/vmt \text{ [Table 13.2.1-2, for PM]}$$

$$lb/vmt \text{ [Table 13.2.1-2, for } PM_{10}]$$

$$lb/vmt$$

$$lb/vmt$$

$$\text{ppm [lead concentration in road surface material, Kleinfelder 1999]}$$

$$\text{Lead} = 11.5$$

$$E_{(\text{lead})} = 2.43E-06$$

	Car	Pickup	3-Axle Truck	5-Axle Truck	Motorcycle	Total
Average vehicle weight (tons):	2.0	3.0	4.25	6.0	0.75	
Number of vehicles	5,810	7,112	65	25	16	
VMT per trip	2	2	1	1	2	
Hours per year:	8,760	8,760	8,760	8,760	8,760	
VMT (per hour):	484.2	592.7	2.7	1.0	1.3	
VMT (annual):	4,241,300	5,191,760	23,725	9,125	11,680	9,477,590
Percentage traveled	44.75%	54.78%	0.25%	0.10%	0.12%	

Paved Road Fugitive Emissions:

Pollutant	lb/hr	tpy
PM	114.21	500.22
PM10	22.08	96.71
Lead	1.31E-03	0.01

Notes:

^a Municipal solid waste silt loading factor used as it was the closest representation to process (mix of large and small material)

Vehicle miles referenced from MHA FB 2005 AEI

**Table B.4.7.2-2
Unpaved Roads
Unpaved Roads PTE**

Unpaved Roads emission factor from AP-42, Section 13.2.2: *Unpaved Roads* (11/06)

$$E = [k(s/12)^a(S/30)^d]/(M/0.5)^c - C$$

where:

s = 6.4	surface material silt content (%) [table 13.2.2-1, Municipal solid waste landfill]
W = 2.4	tons [Mean vehicle weight= car+pickup+3 axle + 5 axle + motorcycle]
M = 1.0	surface material moisture content (%) [Table 13.2.2-3]
S = 10.0	mean vehicle speed (mph)
k = 6.0	lb/VMT [Table 13.2.2-2, for PM]
k = 1.8	lb/VMT [Table 13.2.2-2, for PM ₁₀]
a = 1.0	constant [Table 13.2.2-2, for PM and PM ₁₀]
c = 0.3	constant [Table 13.2.2-2, for PM]
c = 0.2	constant [Table 13.2.2-2, for PM ₁₀]
d = 0.3	constant [Table 13.2.2-2, for PM]
d = 0.5	constant [Table 13.2.2-2, for PM ₁₀]
C = 0.00047	lb/VMT [Table 13.2.2-4, for PM and PM ₁₀]
E _(PM) = 1.87	lb/VMT
E _(PM10) = 0.48	lb/VMT
Lead = 11.5	ppm [lead concentration in road surface material, Kleinfelder 1999]
E _(lead) = 2.15E-05	lb/VMT

	Car	Pickup	3-Axle Truck	5-Axle Truck	Total
Average vehicle weight	2.0	3.0	4.25	6.0	
Number of vehicles	29	32	60	10	
VMT per trip	1	1	1	1	
Hours per year:	8,760	8,760	8,760	8,760	
VMT (per hour):	1.2	1.3	2.5	0.4	
VMT (annual):	10,585	11,680	21,900	3,650	47,815
Percentage traveled	22.14%	24.43%	45.80%	7.63%	

Unpaved Road Fugitive Emissions:

Pollutant	lb/hr	tpy
PM	3.31	14.49
PM10	0.85	3.74
Lead	3.80E-05	1.67E-04

Notes:

^a Municipal solid waste silt loading factor used as it was the closest representation to process (mix of large and small material)

Vehicle miles referenced from MHAFB 2005 AEI

Appendix C
Certified Letter-PTC Revisions



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH FIGHTER WING (ACC)
MOUNTAIN HOME AIR FORCE BASE IDAHO

19 DEC 2006

Colonel Anthony J. Rock
Commander
366 Gunfighter Avenue, Suite 331
Mountain Home AFB ID 83648-5299

Mr. Bill Rogers
Permit Coordinator
Idaho Department of Environmental Quality
1410 N Hilton
Boise ID 83706

Dear Mr. Rogers

In accordance with the Idaho Administrative Procedures Act (IDAPA) 58.01.01.209.04, Rules for the Control of Air Pollution in Idaho, Mountain Home Air Force Base (MHAFB) is issuing a formal REVISION OF PERMITS TO CONSTRUCT (PTC). MHAFB would like to make the following changes in the appropriate PTC:

1. Modify Permit Condition 3.1.8 (PTC No. P-040025) Air Opacity Requirements
2. Modify Permit Condition 3.2.6 (PTC No. P-040025) Air Opacity Requirements
3. Remove Permit Condition 4.3 (PTC No. P-040026) Jet Engine Testing Limitations
4. Remove Permit Condition 4.7 (PTC No. P-040026) Air Opacity Requirements
5. Remove Permit Condition 5.6 (PTC No. P-040026) Material Inventory Requirement
6. Remove Permit Condition 5.11 (PTC No. P-040026) Material Inventory Requirement
7. Modify Permit Condition 10.6 (PTC No. P-040025) Air Opacity Requirements
8. Clarify Permit Condition 5.1 (PTC No. P-040026) Air Opacity Requirements
9. Clarify Permit Condition 6.1 (PTC No. P-040026) Air Opacity Requirements
10. Clarify Permit Condition 7.3 (PTC No. P-040026) Air Opacity Requirements
11. Clarify Permit Condition 8.3 (PTC No. P-040026) Air Opacity Requirements

The requested revisions primarily involve quarterly air opacity requirements, materials inventory requirements for surface coating operations and jet engine testing limitations.

All the permit conditions referenced in this request are as incorporated in the MHAFB's Quality Tier I Operating Permit Number: T1-040043.

1. Modify Permit Condition 3.1.8 (PTC No. P-040025) – Air Opacity Requirements

Section 3.1 is associated with the dual-fuel-fired Kewanee boilers at the base hospital. There are three boilers sharing a common stack and each is rated at 5.231 MMBtu/hr. Each boiler can be operated by natural gas or distillate fuel and is permitted to operate no more than

500 hours per any consecutive 12-month period when fueled by distillate fuel (Permit Condition 3.1.4). As shown in Figure 1, each of the boilers has run less than 7 hours per any consecutive 12 month period since February 2000.

Permit Condition 3.1.8 requires quarterly visible emission observations while oil is being combusted in accordance with IDAPA 58.01.01.625. Visual emissions observations are only required when distillate fuel is being combusted. Since distillate fuel is rarely used in the Kewanee boilers and then only to perform routine testing, maintenance and visual emissions observations or if there is a disruption in the natural gas supply, MHA FB is proposing to change Permit Condition 3.1.8 to the following:

Visible emissions observations shall not be required unless the permitted unit has operated for more than 100 hours per any consecutive 12-month period when fueled by distillate fuel. If the permitted unit has operated more than 100 hours per any consecutive 12-month period then the permittee shall conduct a visible emissions observation on the boiler stack quarterly, during daylight hours, while oil is being combusted for a minimum of two quarters until the permitted unit operates less than 75 hours per any consecutive 12-month period. The length of each observation shall be no less than 10 minutes. If any visible emissions are present at the time of the observation, the permittee shall conduct a visible emissions observation in accordance with IDAPA 58.01.01.625. During this observation, a minimum of thirty 15-second observations shall be recorded while the process is in operation. If opacity is greater than 20%, as determined in accordance with IDAPA 58.01.01.625, the permittee shall take all necessary corrective action and report excess emissions in accordance with Permit Condition 2.9. The permittee shall record the results of each visible emission observation, and corrective action taken, if any, and maintain the records in accordance with Permit Condition 2.11.

This change will still allow for opacity readings if the permitted unit is operated for long periods of time. The Kewanee boilers have not had an excess emissions report required for violating opacity standards. MHA FB will provide a copy of past visible emissions observations if IDEQ would like to review this information.

2. Modify Permit Condition 3.2.6 (PTC No. P-040025) – Air Opacity Requirements

Section 3.2 is associated with the dual-fuel-fired Hurst boiler at the base hospital. The boiler is rated at 1.05 MMBtu/hr and can be operated by natural gas or distillate fuel and is permitted to operate no more than 500 hours per any consecutive 12-month period when fueled by distillate fuel (Permit Condition 3.2.4). As shown in Figure 2, the boiler has run less than 4 hours per any consecutive 12 month period. The Hurst boiler does not operate continuously. Once the boiler reaches operating pressure, it will only fire as required to maintain this pressure. There may be times that the Hurst boiler will not operate on a continuous firing to observe visible emission observations for 10 minutes.

Permit Condition 3.2.6 requires quarterly visible emission observations while oil is being combusted in accordance with IDAPA 58.01.01.625. Visual emissions observations are only required when distillate fuel is being combusted. Since distillate fuel is rarely used in the Hurst

boiler and then only to perform routine testing, maintenance, and visual emissions observations or if there is a disruption in the natural gas supply, MHAFB is proposing to change Permit Condition 3.2.6 to the following:

Visible emissions observations shall not be required unless the Hurst boiler has operated for more than 50 hours per any consecutive 12-month period when fueled by distillate fuel. If the permitted unit has operated more than 50 hours per any consecutive 12-month period then the permittee shall conduct a visible emissions observation on the boiler stack quarterly, during daylight hours, while oil is being combusted for a minimum of two quarters until the permitted unit operates less than 25 hours per any consecutive 12-month period. The permittee shall conduct visible emissions inspection of the Hurst boiler stack using the procedures contained in IDAPA 58.01.01.625 to demonstrate compliance with Permit Condition 3.2.2. Records of each quarterly inspection, including the weather conditions existing at the time of the inspection, shall be maintained in accordance with Permit Condition 2.11 and shall be made available to DEQ representatives upon request.

This change will still allow for opacity readings if the permitted unit is operated for long periods of time. The Hurst boiler has not had an excess emissions report required for violating opacity standards. MHAFB will provide a copy of past visible emissions observations if IDEQ would like to review this information.

3. Remove Permit Condition 4.3 (PTC No. P-040026) – Jet Engine Testing Limitations

Section 4 of the permit is associated with the operations at the jet engine testing Hush Houses. MHAFB operates two separate Hush Houses for testing of jet engines to minimize noise from engine testing. When an engine is still installed in an aircraft, it is considered a mobile source and not required to operate under the terms and conditions of the Tier I operating permit. Testing of engines in an aircraft is usually performed in Hush House II, building 270. If the engine is removed from the aircraft and affixed to a test stand, then the engine is subject to the terms and conditions of the Tier I operating permit. Testing of engines affixed to a stand is usually performed in Hush House I, building 1344.

Currently Model No F100-PW-220 and F100-PW-229 are the only engines used at MHAFB and the only engines allowed to be tested according to the Tier I permit. To ensure maximum flexibility if mission requirements change, MHAFB would like to be able to test any engine type that may be on base by removing Permit Condition 4.3. The annual emission rate limits in the Tier I permit will stay the same. MHAFB will calculate emissions each month based off each engine type for a cumulative total to ensure that the emission rate limits are not exceeded.

4. Remove Permit Condition 4.7 (PTC No. P-040026) – Air Opacity Requirements

MHAFB would also like to remove Permit Condition 4.7 from the permit. This permit condition is for visible emissions observations at the Hush Houses. Aircraft engines are designed to produce very little visible emissions or none at all. As such, the only times that

visible emissions are observed is when there is a problem with the engine that is being tested. Once a problem is detected, the engine test is stopped until the problem is fixed. The Hush Houses have not had an excess emissions report required for violating opacity standards. MHAFB will provide a copy of past visible emissions observations if IDEQ would like to review this information.

5. Remove Permit Condition 5.6 (PTC No. P-040026) – Material Inventory Requirement

6. Remove Permit Condition 5.11 (PTC No. P-040026) – Material Inventory Requirement

Section 5 of the permit is associated with the corrosion control units, specifically the aircraft (LBP-1330) and aircraft parts (SPB-1330) surface coating spray booths. MHAFB would like to remove Permit Condition 5.6 and 5.11. Permit Condition 5.6 requires the LPB-1330 and SPB-1330 to use only materials that are included in the list required under Permit Condition 5.11. As there are no requirements to add additional material to Permit Condition 5.11 other than to include the material in the list, the LPB-1330 and SPB-1330 can use any material just by including it on the list in Permit Condition 5.11. Also LPB-1330 and SPB-1330 have technical orders that must be followed which require specific surface coating materials so they are limited to what they can use with out Permit Condition 5.11. MHAFB also has a chemical management system in place so that shops can only order chemicals they are approved to use. This chemical management system is used to help determine actual emissions for the Air Emissions Inventory. Permit Conditions 5.6 and 5.11 are purely administrative and serve no additional benefit to show compliance with any permit conditions. The only permit limitations are for visible emissions and for particulate matter. Also the other permitted surface coating operations (Section 5 and 6) do not have either of these requirements.

7. Modify Permit Condition 10.6 (PTC No. P-040025) – Air Opacity Requirements

Section 10 of the permit is associated with three emergency generators located at the base hospital. Each generator is rated at 750 kW and is used for emergency back-up power. The generators are only operated for testing and maintenance or if there is a power outage. In order to maintain certain accreditations, the hospital must test the generators 12 times a year. The tests must be conducted for at least 30 minutes under a dynamic load that is at least 30% of the nameplate rating. According to Figure 3, the maximum hours of operation per consecutive 12-month period are 83 hours. This is well under the permitted limit of 500 hours per consecutive 12-month period. MHAFB is proposing to change Permit Condition 10.6 to the following:

Visible emissions observations shall not be required unless the permitted unit has operated for more than 100 hours per any consecutive 12-month period. If the permitted unit has operated more than 100 hours per any consecutive 12-month period then the permittee shall conduct a visible emissions observation on the generator stack quarterly, during daylight hours, for a minimum of two quarters until the permitted unit operates less than 75 hours per any consecutive 12-month period. The permittee shall conduct a visible emissions observation in accordance with IDAPA 58.01.01.625 to demonstrate compliance with Permit Condition 10.2. Records of each inspection, including the weather conditions existing at the time of the inspection, shall be maintained in

accordance with Permit Condition 2.11 and shall be made available to DEQ representatives upon request

This change will still allow for opacity readings if the permitted unit is operated for long periods of time. The generators have not had an excess emissions report required for violating opacity standards. MHAFB will provide a copy of past visible emissions observations if IDEQ would like to review this information.

8. Clarify Permit Condition 5.1 (PTC No. P-040026) – Air Opacity Requirements
9. Clarify Permit Condition 6.1 (PTC No. P-040026) – Air Opacity Requirements
10. Clarify Permit Condition 7.3 (PTC No. P-040026) – Air Opacity Requirements
11. Clarify Permit Condition 8.3 (PTC No. P-040026) – Air Opacity Requirements

MHAFB would also like to clarify what is required to ensure full compliance with Permit Conditions 5.1, 6.1, 7.3, and 8.3. All of these Permit Conditions deal with visible emissions. Permit Condition 5.1 and 7.3 are associated with visible emissions from the permitted paint booths. Permit Condition 6.1 is associated with flight line spray painting and Permit Condition 8.3 with the bead blasting unit. Each of these Permit Conditions establishes an opacity limit of 20%, but there are no monitoring or record keeping requirements to ensure that these Permit Conditions are met. Currently MHAFB is performing a quarterly visible evaluation in accordance with IDAPA 58.01.01.625 to ensure compliance. None of these operations have produced any detectable visible emissions due to the nature of the operation.

There are at least 7 subparts to 40 CFR 60 that deal with surface coating operations. None of these subparts have any opacity limits specified. MHAFB would like to clarify the permit to show that quarterly visible emission observations are not required for any of the permitted painting operations on base.

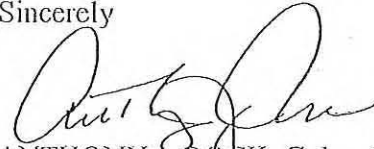
The bead blasting unit is controlled by a baghouse system. The only release point into the environment is a small gap located between the drop shoot and the barrel that the dust collects into. The interval that dust is released is impossible to predict because it is relative to the pressure drop across the bags and the material that is being cleaned. During the time required to meet the conditions of IDAPA 58.01.01.625, there may not even be a release because there is not enough of a pressure drop to require the bags to be cleared. Also as the release point is not a stack, there is no place that an observer can stand to have a clear view of all potential release points. MHAFB would like to clarify the permit to show that quarterly visible emission observations are not required for the bead blasting unit.

MHAFB would like to invite IDEQ to our installation and observe any or all of these activities in order to help determine that these requests are reasonable and will still ensure full compliance with all applicable regulations.

If you have any questions regarding this issue or would like to schedule time to observe the permitted operations, please feel free to call my permit facility contact, Mr. Bryan Trimberger, at (208) 828-3724.

In accordance with IDAPA 58.01.01.123, the following certification of this document is submitted for the listed correspondence. I, Colonel Anthony J. Rock, certify based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Sincerely

A handwritten signature in black ink, appearing to read "Anthony J. Rock", written over a horizontal line.

ANTHONY J. ROCK, Colonel, USAF

Attachment
Hospital Boiler Spreadsheets

Kewanee Boilers

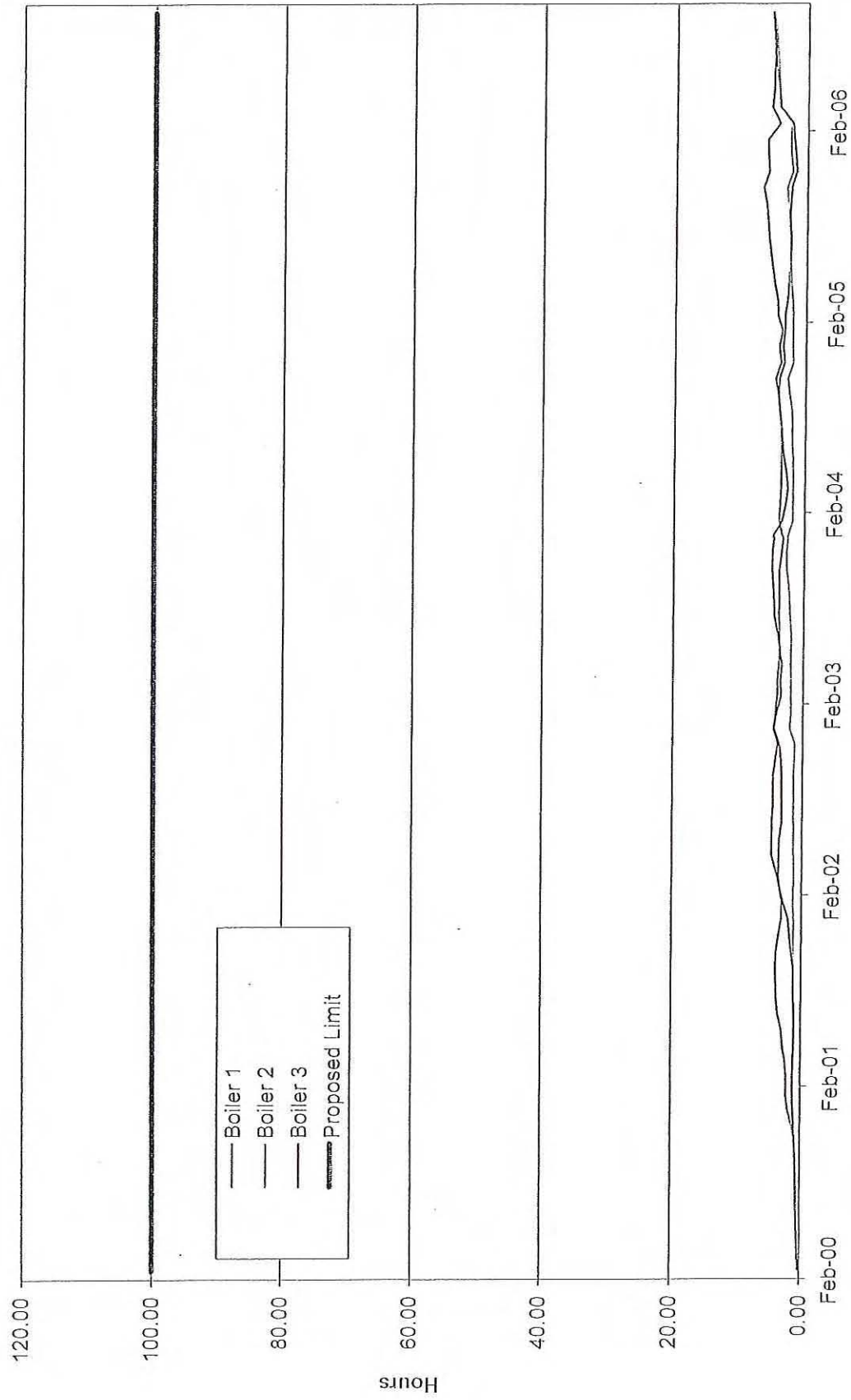


Figure 1

Hurst Boiler

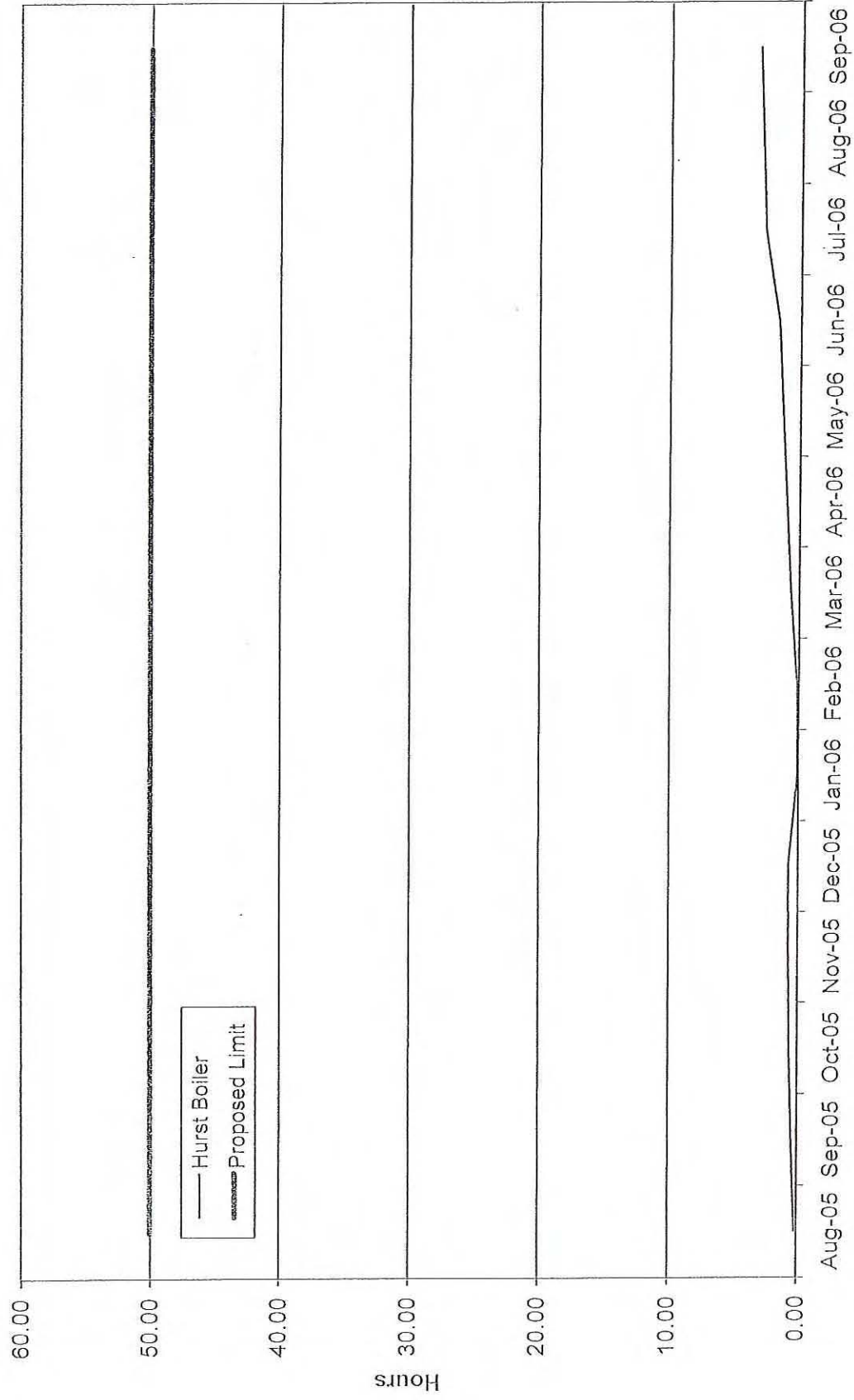


Figure 2

Hospital Generators

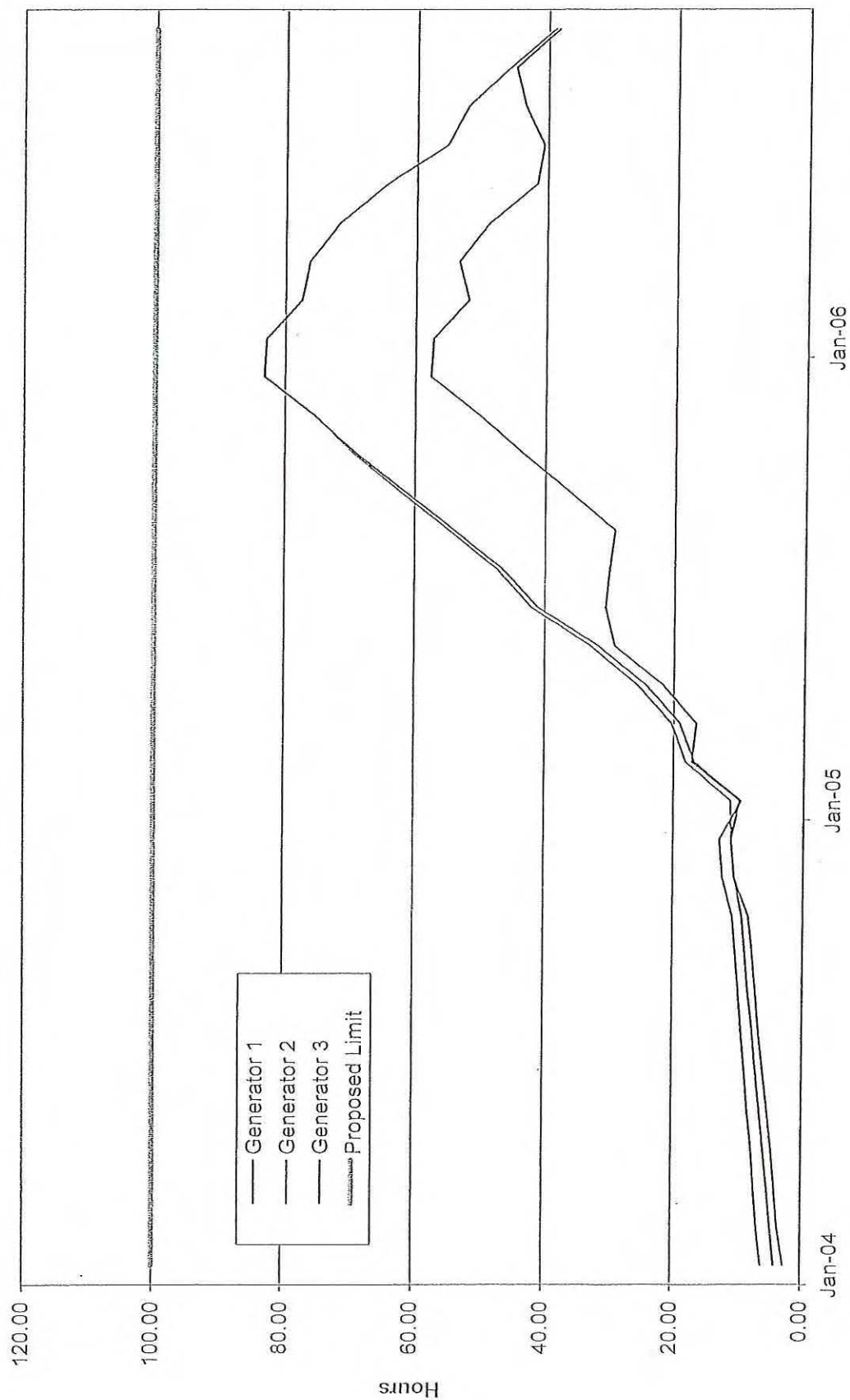


Figure 3